



JC02 Rec'd PCT/PTO 07 APR 2005

PCT #3

PTO/SB/21 (09-04)

# TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Application Number	10/517,942
Filing Date	
First Named Inventor	Manger, Ian D.
Art Unit	Not yet known
Examiner Name	Not yet known
Attorney Docket Number	020174-008610US

Total Number of Pages in This Submission

## ENCLOSURES (Check all that apply)

- ☐ Fee Transmittal Form
- ☐ Fee Attached
- ☐ Amendment/Reply
- ☐ After Final
- ☐ Affidavits/declaration(s)
- ☐ Extension of Time Request
- ☐ Express Abandonment Request
- ☒ Information Disclosure Statement

- ☐ Drawing(s)
- ☐ Licensing-related Papers
- ☐ Petition
- ☐ Petition to Convert to a Provisional Application
- ☐ Power of Attorney, Revocation Change of Correspondence Address
- ☐ Terminal Disclaimer
- ☐ Request for Refund
- ☐ CD, Number of CD(s) \_\_\_\_\_
- ☐ Landscape Table on CD

- ☐ After Allowance Communication to TC
- ☐ Appeal Communication to Board of Appeals and Interferences
- ☐ Appeal Communication to TC (Appeal Notice, Brief, Reply Brief)
- ☐ Proprietary Information
- ☐ Status Letter
- ☒ Other Enclosure(s) (please identify below):
  - Return Postcard
  - Copies of 18 cited foreign references
  - Copies of 74 cited non-patent literature references

- ☐ Certified Copy of Priority Document(s)
- ☐ Reply to Missing Parts/ Incomplete Application
- ☐ Reply to Missing Parts under 37 CFR 1.52 or 1.53

Remarks The Commissioner is authorized to charge any additional fees to Deposit Account 20-1430.

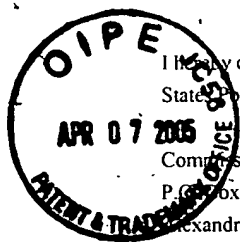
## SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm Name	Townsend and Townsend and Crew LLP		
Signature			
Printed name	Patrick M. Boucher		
Date	2005 April 4	Reg. No.	44,037

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PATENT  
Attorney Docket No.: 020174-008610US  
Client Reference No.: F131.V1.PCT

On APRIL 4, 2005

TOWNSEND and TOWNSEND and CREW LLP

By: Nicole Wartell  
Nicole Wartell

+

### IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Manger, Ian et al.

Application No.: 10/517,942

Filed:

For: RECIRCULATING FLUIDIC  
NETWORK AND METHODS FOR  
USING THE SAME

Examiner: Not yet known

Art Unit: Not yet known

SUPPLEMENTAL INFORMATION  
DISCLOSURE STATEMENT UNDER 37  
CFR §1.97 and §1.98

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:


The references cited on attached form PTO/SB/08A and PTO/SB/08B are being called to the attention of the Examiner. Copies of the references [excluding cited U.S. Patents, U.S. Patent Application publications, and appropriate IFW-stored, pending U.S. Patent Applications and portions thereof, per 1287 OG 163] are enclosed. It is respectfully requested that the cited references be expressly considered during the prosecution of this application, and

the references be made of record therein and appear among the "references cited" on any patent to issue therefrom.

As provided for by 37 CFR 1.97(g) and (h), no inference should be made that the information and references cited are prior art merely because they are in this statement and no representation is being made that a search has been conducted or that this statement encompasses all the possible relevant information.

Applicant believes that no fee is required for submission of this statement. However, if a fee is required, the Commissioner is authorized to deduct such fee from the undersigned's Deposit Account No. 20-1430. Please deduct any additional fees from, or credit any overpayment to, the above-noted Deposit Account.

Respectfully submitted,

  
Patrick M. Boucher  
Reg. No. 44,037

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60442766 v1



Substitute for form 1449A/PTO			<b>Complete if Known</b>		
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)			Application Number	10/517,942	
			Filing Date		
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			Examiner Name	Not yet known	
Sheet	1	of	7	Attorney Docket Number	020174-008610US

U.S. PATENT DOCUMENTS+					
Examiner Initials*	Cite No. <sup>1</sup>	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number Kind Code <sup>2</sup> (if known)			
	A1	US-3,570,515	03-16-1971	Kinner	
	A2	US-3,747,628	07-24-1973	Holster et al.	
	A3	US-4,046,159	09-06-1977	Pegourie	
	A4	US-4,119,368	10-10-1978	Yamakazi	
	A5	US-4,153,855	05-08-1979	Feingold	
	A6	US-4,245,673	01-20-1981	Bouteille et al.	
	A7	US-4,434,704	03-06-1984	Surjaatmadja	
	A8	US-4,898,582	02-06-1990	Faste	
	A9	US-5,085,562	02-04-1992	Van Lintel	
	A10	US-5,088,515	02-18-1992	Kamen	
	A11	US-5,096,388	03-17-1992	Weinberg	
	A12	US-5,126,115	06-30-1992	Fujita et al.	
	A13	US-5,164,558	11-17-1992	Huff et al.	
	A14	US-5,171,132	12-15-1992	Miyazaki	
	A15	US-5,224,843	07-06-1993	Van Lintel	
	A16	US-5,259,737	11-09-1993	Kamisuki et al.	
	A17	US-5,265,327	11-30-1993	Faris et al.	
	A18	US-5,290,240	03-01-1994	Horres, Jr.	
	A19	US-5,336,062	08-09-1994	Richter	
	A20	US-5,346,372	09-13-1994	Naruse et al.	
	A21	US-5,375,979	12-27-1994	Trah	
	A22	US-5,376,252	12-27-1994	Ekstrom	
	A23	US-5,400,741	03-28-1995	DeTitta et al.	
	A24	US-5,423,287	06-13-1995	Usami et al.	
	A25	US-5,529,465	06-25-1996	Zengerle et al.	
	A26	US-5,593,130	01-14-1997	Hansson et al.	
	A27	US-5,642,015	06-24-1997	Whitehead et al.	
	A28	US-5,659,171	08-19-1997	Young et al.	
	A29	US-5,660,370	08-26-1997	Webster	
	A30	US-5,681,024	10-28-1997	Lisec et al.	
	A31	US-5,705,018	01-06-1998	Hartley	
	A32	US-5,759,014	06-02-1998	Van Lintel	
	A33	US-5,775,371	07-07-1998	Pan et al.	
	A34	US-5,836,750	11-17-1998	Cabuz	
	A35	US-5,842,787	12-01-1998	Kopf-Sill et al.	
	A36	US-5,875,817	03-02-1999	Carter	
	A37	US-5,876,187	03-02-1999	Afromowitz	
	A38	US-5,932,799	08-03-1999	Moles	
	A39	US-5,942,443	08-24-1999	Parce et al.	
	A40	US-6,007,309	12-28-1999	Hartley	
Examiner Signature		Date Considered			

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60442766 v1

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			Art Unit	Not yet known	
Examiner Name	Not yet known				
Sheet	2	of	7	Attorney Docket Number	020174-008610US

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	A41	US-6,043,080	03-28-2000	Lipshutz et al.	
	A42	US-6,123,769	09-26-2000	Sanjoh	
	A43	US-6,155,282	12-05-2000	Zachary et al.	
	A44	US-6,174,365 B1	01-16-2001	Sanjoh	
	A45	US-6,296,673 B1	10-02-2001	Santarsiero et al.	
	A46	US-6,409,832 B2	06-25-2002	Weigl et al.	
	A47				

FOREIGN PATENT DOCUMENTS								
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document			Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>
		Country Code <sup>3</sup>	Number <sup>4</sup>	Kind Code <sup>5</sup> (if known)				
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	B6	EPO	EP 0 845 603	A1	06-03-1998			<input type="checkbox"/>
	B7	EPO	EP 0 999 055	A2	05-10-2000			<input type="checkbox"/>
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	B9	GB	2 308 460	A	06-25-1997			<input type="checkbox"/>
	B10	PCT	WO 98/07069	A1	02-19-1998			<input type="checkbox"/>
	B11	PCT	WO 99/00655	A2	01-07-1999			<input type="checkbox"/>
	B12	PCT	WO 99/04361	A1	01-28-1999			<input type="checkbox"/>
	B13	PCT	WO 99/17093	A1	04-08-1999			<input type="checkbox"/>
	B14	PCT	WO 99/52633	A1	10-21-1999			<input type="checkbox"/>
	B15	PCT	WO 00/00678	A1	01-06-2000			<input type="checkbox"/>
	B16	PCT	WO 00/43748	A1	07-27-2000			<input type="checkbox"/>
	B17	PCT	WO 00/60345	A1	10-12-2000			<input type="checkbox"/>
	B18	PCT	WO 01/01025	A2	01-04-2001			<input type="checkbox"/>

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Substitute for form 1449B/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  <i>(use as many sheets as necessary)</i>				<b>Complete if Known</b>	
				Application Number	10/517,942
				Filing Date	
				First Named Inventor	Manger, Ian D.
				Art Unit	Not yet known
				Examiner Name	Not yet known
Sheet	3	of	7	Attorney Docket Number	020174-008610US

NON PATENT LITERATURE DOCUMENTS				
Examiner Initials *	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.		T <sup>2</sup>
	C1	AHN et al., "Fluid Micropumps Based on Rotary Magnetic Actuators," Proceedings of 1995 IEEE Micro Electro Mechanical Systems Workshop (MEMS '95), held in Amsterdam, Netherlands on 1/29-2/2/1995, pgs. 408-412.		
	C2	ANDERSSON et al. "Consecutive Microcontact Printing - Ligands for Asymmetric Catalysis in Silicon Channel" Sensors&Actuators B: Chemical, 2001, pp. 79-84, Vol. 79, Issue 1.		
	C3	BENARD et al., "A Titanium-Nickel Shape-Memory Alloy Actuated Micropump," Proceedings of Transducers '97, 1997 International Conference on Solid-State Sensors and Actuators, held in Chicago, IL, 6/16-19/1997, 1:361-364 (1997).		
	C4	BRECHTEL et al.; "Control of the electroosmotic flow by metal-salt-containing buffers", J Chromatography A, 1995, pp. 97-105, Vol. 716		
	C5	BRYZEK et al.; "Micromachines on the March", IEEE Spectrum, 1994, pp. 20-31, Vol. 31, No. 5		
	C6	BUCHAILLOT et al.; "Silicon nitride thin films Young's modulus determination by an optical non-destructive method", Jpn. J Appl Phys, 1995, pp. L794-L797, Vol. 36, No. 2:6B		
	C7	CHIU et al.; "Patterned Deposition of Cells and Proteins onto Surfaces by Using Three-Dimensional Microfluidic Systems", Proc. Natl. Acad. Sci., 2000, pp. 2408-2413, Vol. 97, No. 6		
	C8	CHOU et al. "A microfabricated device for sizing and sorting DNA molecules", Applied Physical Sciences, Biophysics, Proc. Natl. Acad. Sci., 1999, pp. 11-13, Vol. 96, U.S.A.		
	C9	DELAMARCHE et al.; "Patterned delivery of immunoglobulins to surfaces using microfluidic networks", Science, 1997, pp. 779-781, Vol. 276		
	C10	DUFFY et al. "Patterning Electroluminescence Materials with Feature Sizes as Small as 5µm Using Elastomeric Membranes as Masks for Dry Lift-Off", Advanced Materials, 1999, pp. 546-552, Vol. 11, No. 7		
	C11	DUFFY et al. "Rapid Prototyping of Microfluidic Switches in Poly(dimethylsiloxane) and Their Actuation by Electro-Osmotic Flow" Journal of Microeng, 1999, pp. 211-217, Vol. 9		
	C12	DUFFY et al. "Rapid Prototyping of Microfluidic Systems in Poly(dimethylsiloxane)", Analytical Chemistry, 1998, pp. 4974-4984, Vol. 70, No. 23.		
	C13	EFFENHAUSER et al.; "Integrated capillary electrophoresis on flexible silicone microdevices: Analysis of DNA restriction fragments and detection of single DNA molecules on microchips", Anal. Chem, 1997, pp. 3451-3457, Vol. 69.		
	C14	EFFENHAUSER et al.; "Integrated chip-based capillary electrophoresis", Electrophoresis, 1997, pp. 2203-2213, Vol. 18		
	C15	FAHRENBERG et al. "A microvalve system fabricated by thermoplastic molding", J Micromech Microeng, 1995, pp.169-171, Vol. 5		

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NON PATENT LITERATURE DOCUMENTS			
Examiner Initials *	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
	C16	FU et al.; "A microfabricated fluorescence-activated cell-sorter", Nature Biotechnology, 1999, pp. 1109-1111, Vol. 17	
	C17	GASS et al., "Integrated flow-regulated silicon micropump," Sensors and Actuators A Physical, 1994, p. 335-338, Vol. 43.	
	C18	GERLACH, T., "Pumping Gases by a Silicon Micro Pump with Dynamic Passive Valves," Proceedings of Transducers '97, 1997 International Conference on Solid-State Sensors and Actuators, held in Chicago, IL, 6/16-19/1997, pp. 357-360, Vol. 1.	
	C19	GOLL et al., "Microvalves with bistable buckled polymer diaphragms," J. Micromech. Microeng., 1996, pp.77-79, Vol. 6	
	C20	GRAVESEN et al.; "Microfluids- A Review", Journal Micromech Microeng, 1993, pp. 168-192, Vol. 3	
	C21	HARRISON et al., "Micromachining a Miniaturized Capillary Electrophoresis-Based Chemical Analysis System on a Chip," Science, 1993, pp.895-897, Vol. 261	
	C22	HORNBECK et al., "Bistable Deformable Mirror Device," Spatial Light Modulators and Applications 1988 Technical Digest Series, Volume 8, Postconference Edition, Summaries of papers presented at the Spatial Light Modulators and Applications Topical Meeting, June 15-17, 1988, Optical Society of America, pgs. 107-110.	
	C23	HOSOKAWA et al., "Handling of Picoliter Liquid Samples in a Poly(dimethylsiloxane)-Based Microfluidic Device," Anal. Chem., 1999, 71(20):4781-4785	
	C24	IKUTA et al., "Three dimensional micro integrated fluid systems (MIFS) fabricated by stereo lithography," IEEE Kyushu Institute of Technology, 1994, pp. 1-6.	
	C25	JACOBSON et al., "High-speed separations on a microchip," Anal. Chem., 1994, 66(7):1114-1118.	
	C26	JACOBSON et al., "Microfluidic Devices for Electrokinetically Driven Parallel and Serial Mixing," Anal. Chem., 1999, 71(20):4455-4459.	
	C27	JERMAN, H., "Electrically-Activated, Normally-Closed Diaphragm Valves," Proceedings of Transducers '91, 1991 International Conference on Solid-State Sensors and Actuators, pages 1045-1048 (1991).	
	C28	JUNG et al., "Chemical and Physical Interactions at Metal/Self-Assembled Organic Monolayer Interfaces," Critical Reviews in Solid State and Material Sciences, 1994, pp. 2-10, Vol. 19, No. 1.	
	C29	KANE et al., "Finite element analysis of nonsmooth contact", <i>Computer Methods in Applied Mechanics and Engineering</i> , 180(1-2):1-26 (1999)	
	C30	KENIS et al. "Microfabrication Inside Capillaries Using Multiphase Laminar Flow Patterning," Science, 1999, 285:83-85.	

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Examiner Initials *	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.		T <sup>2</sup>
	C31	KIM, ENOCH et al., "Micromolding in Capillaries: Applications in Material Science," J. American Chemical Society, 118:5722-5731 (1996).		
	C32	KOPP et al. "Chemical Amplification: Continuous-Flow PCR on a Chip", Science, 1998, 280:1046-1048.		
	C33	KUHN et al. "Silicon Charge Electrode Array for Ink Jet Printing", IEEE Transactions on Electron Devices, 1978, pp. 1257-1260, Vol. ED-25, No. 10.		
	C34	LIN et al. "Free-Space Micromachined Optical Switches for Optical Networking," IEEE J. Selected Topics in Quantum Electronics, 1999, pp. 4-9, Vol. 5, No. 1.		
	C35	LÖTTERS et al. "The mechanical properties of the rubber elastic polymer polydimethylsiloxane for sensor applications," J. Micromech. Microeng., 1997, 7:145-147.		
	C36	LUCY et al., "Characterization of the Cationic Surfactant Induced Reversal of Electroosmotic Flow in Capillary Electrophoresis," Anal. Chem., 1996, pp. 300-305, Vol. 68.		
	C37	MALUF, N., <u>An Introduction to Microelectromechanical Systems Engineering</u> , Dec. 1999, pages 42-45, Artech House Publishers, Boston London.		
	C38	MULLER et al., "Surface-Micromachined Microoptical Elements and Systems," Proceedings of IEEE, 1998, 86(8):1705-1720.		
	C39	OAKLEY and KNIGHT, "Adaptive dynamic relaxation algorithm for non-linear hyperelastic structures", <i>Computer Methods in Applied Mechanics and Engineering</i> , 126:67-89 (1995).		
	C40	OGDEN, "Elastic Deformations of Rubberlike Solids", in <i>Mechanics of Solids</i> , pp. 499-537 (1982)		
	C41	OLSSON et al., "Simulation Studies of Diffuser and Nozzle Elements for Valve-less Micropumps," Proceedings of Transducers '97, 1997 International Conference on Solid-State Sensors and Actuators, held in Chicago, IL, 6/16-19/1997, 2:1039-1042 (1997).		
	C42	PETHIG & MARKX "Applications of dielectrophoresis in biotechnology," <i>Tibtech</i> , 15:426-432 (1997).		
	C43	Phillips, W.C. and Rayment, I. "A systematic method for aligning double focusing mirrors." <i>Methods in Enzymology</i> , 1985, Vol. 114 (Wyckoff, Hirs and Timasheff, eds.), 316-329, Academic Press.		
	C44	QIN et al., "Photolithography with transparent reflective photomasks," <i>J. Vac.Sci. Technology</i> , 16(1):98-103 (1998).		
	C45	QIN et al., "Elastomeric Light Valves***", <i>Adv. Mater.</i> , 1997, pp.407-410, Vol. 9, No. 5.		
	C46	QUAKE S.R. and SCHERER A.; "From Micro- to Nanofabrication with Soft Materials", <i>Science</i> , November 24, 2000; pp. 1536-1540, Vol. 290, No. 5496.		

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	C47	RAPP, R., "LIGA micropump for gases and liquids," Sensors and Actuators A, 1994, pp.57-61, Vol. 40.	
	C48	ROYLANCE et al., "A Batch-Fabricated Silicon Accelerometer", IEEE Transactions on Electron Devices, December 1979, pp. 1911-1917, Vol. ED-26, No. 12.	
	C49	SCHASFOORT et al., "Field-Effect Flow Control for Microfabricated Fluidic Networks," Science, 1999, 286:942-945.	
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Examiner Signature		Date Considered	
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\* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

Substitute for form 1449B/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)				<b>Complete if Known</b>	
				Application Number	10/517,942
				Filing Date	
				First Named Inventor	Manger, Ian D.
				Art Unit	Not yet known
				Examiner Name	Not yet known
Sheet	7	of	7	Attorney Docket Number	020174-008610US

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials *	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
	C63	VIEIDER et al.; "A Pneumatically Actuated Micro Valve with a Silicon Rubber Membrane for Integration with Fluid Handling Systems", Proceedings of Transducers '95, the 8th International Conference on Solid-State Sensors and Actuators and Eurosensors IX, held in Stockholm, Sweden on 6/25-29/95, 1995, pp. 284-286, Stockholm, Sweden.	
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Examiner Signature		Date Considered	
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